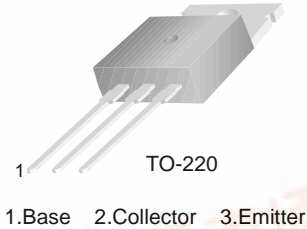


FAIRCHILD
SEMICONDUCTOR™

KSD568/569

Low Frequency Power Amplifier

- Low Speed Switching Industrial Use
- Complement to KSB707/708



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	60 80	V V
		: KSD568 : KSD569	
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current (DC)	7	A
I_{CP}	*Collector Current (Pulse)	15	A
I_B	Base Current	3.5	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	40	W
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	1.5	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

* $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 10\%$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = 80\text{V}, I_E = 0$		10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = 5\text{V}, I_C = 0$		10	μA
h_{FE1} h_{FE2}	*DC Current Gain	$V_{CE} = 1\text{V}, I_C = 3\text{A}$ $V_{CE} = 1\text{V}, I_C = 5\text{A}$	40 20	200	
$V_{CE(sat)}$	*Collector-Emitter Saturation Voltage	$I_C = 5\text{A}, I_B = 0.5\text{A}$		0.5	V
$V_{BE(sat)}$	*Base-Emitter Saturation Voltage	$I_C = 5\text{A}, I_B = 0.5\text{A}$		1.5	V

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty Cycles $\leq 2\%$

h_{FE} Classification

Classification	R	O	Y
h_{FE1}	40 ~ 80	60 ~ 120	100 ~ 200



Typical Characteristics

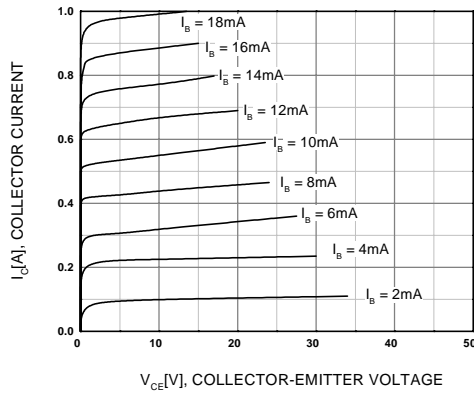


Figure 1. Static Characteristic

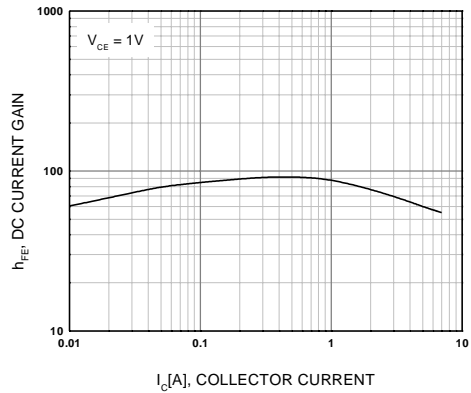


Figure 2. DC current Gain

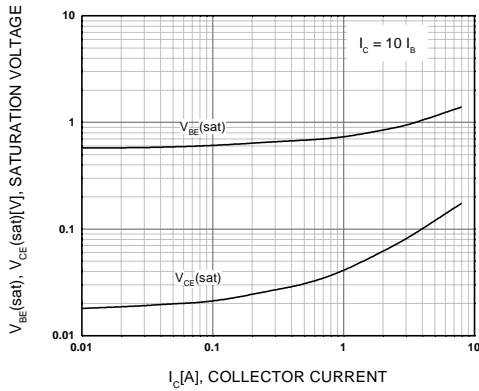


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

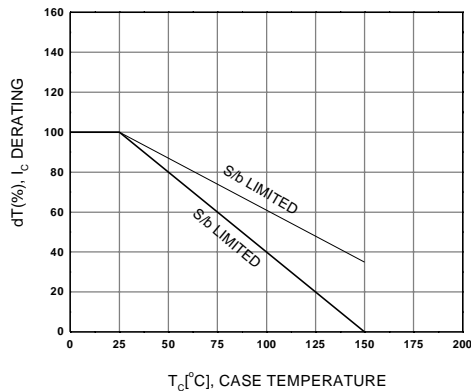


Figure 4. Derating Curve Of Safe Operating Areas

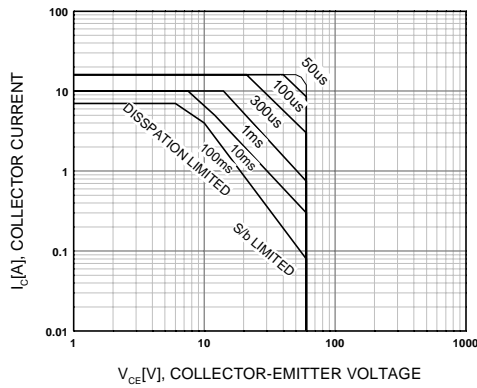


Figure 5. Forward Bias Safe Operating Area

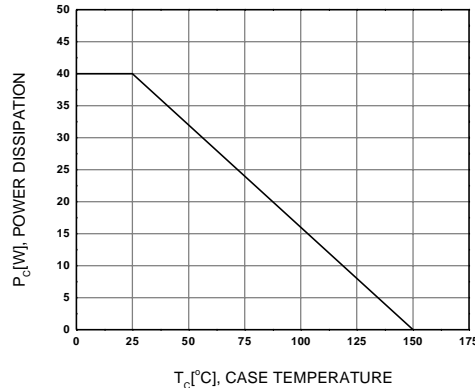
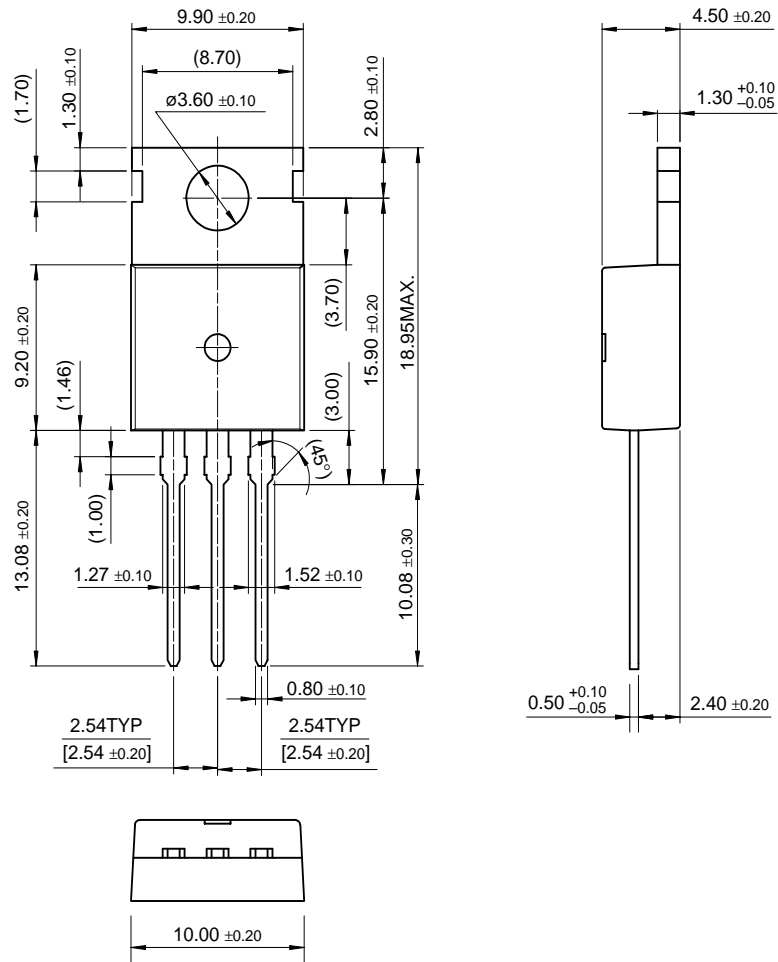


Figure 6. Power Derating

Package Dimensions

KSD568/569

TO-220



Dimensions in Millimeters

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CROSSVOLT™	POPT™	UHC™
E ² CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
FACT Quiet Series™	QST™	
FAST®	Quiet Series™	
FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	

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